HOVENWEEP AND NATURAL BRIDGES NATIONAL MONUMENTS RESEARCH SUMMARY 2007

1) Study Title: Soil Survey of Hovenweep National Monument, Utah
Permit No.: HOVE-2007-SCI-0001
Principal Investigator: Victor Parslow
Purpose of Scientific Study: To provide an updated soil and ecological site inventory for Hovenweep National Monument (HOVE), that meets National Cooperative Soil Survey (NCSS) standards and park management and planning needs.
Findings/Accomplishments for 2007: No survey activities were conducted in Hovenweep National Monument in FY 2007.

2) Study Title: Soil Survey of Natural Bridges National Monument, Utah
Permit No.: NABR-2007-SCI-0001
Principal Investigator: Victor Parslow
Purpose of Scientific Study: To provide an updated soil and ecological site inventory for Natural Bridges National Monument (NABR), that meets National Cooperative Soil Survey (NCSS) standards and park management and planning needs.
Findings/Accomplishments for 2007: 1. Soil inventory activities: Soil survey activities were conducted in Natural Bridges National Monument in 2007. Traverses and transects of the landscape were conducted, and soil descriptions and plant inventory data recorded, in order to further develop the soil-plant-landscape-geology models which will be essential to the completion of the update of the Soil Survey and Ecological Site Descriptions. 16 soil/landscape observations were documented in FY 2007, and soil samples were collected from 31 of these locations. Thirty of those samples were destroyed in analysis. The remaining sample has been catalogued, and is stored in the Richfield USDA Service Center.
2. Archaeological activities: A detailed report is available, including cultural resource avoidance activities in Natural Bridges National Monument, and can be viewed in "Summary Report of Cultural Resources Support Provided to the Soil Surveys of Natural Bridges National Monument, Arches National Park, Canyonlands National Park and Hovenweep National Monument For the Year 2007", at the SEUG office in Moab, Utah. All cultural resources were successfully avoided. No cultural material was unearthed during the course of soil sample collection.

3) Study Title: Monitoring Protocols to Support Long-Term Monitoring of Aquatic Macroinvertebrates in National Park Service Units of the Northern and Southern Colorado Plateau Networks
Permit No.: NABR-2007-SCI-0002
Principal Investigator: Anne Brasher
Purpose of Scientific Study: The objective of the study is to develop a rigorous, well-integrated set of protocols for long-term macroinvertebrate monitoring across the Colorado Plateau. Another objective is to evaluate the utility of aquatic macroinvertebrates as reliable indicators of aquatic ecosystem conditions in dryland systems characteristic of the Colorado Plateau.
Findings/Accomplishments for 2007: Pilot studies assessing habitat characterization and evaluating benthic macroinvertebrate collection techniques were conducted in White Canyon near Sipapu Bridge in 2007. When data analysis is complete, we will provide a brief summary of habitat characterization and macroinvertebrate data that was collected in the White Canyon to the Chief Resource

Manager of Natural Bridges. The report will include a map of the area sampled, a complete species list and graphs representing different macroinvertebrate orders, in addition to relevant habitat data that was collected.

4) Study Title: Population fragmentation, habitat, and conservation genetics of amphibians in the Glen Canyon / Canyonlands region
Permit No.: NABR-2007-SCI-0002
Principal Investigator: Charles Drost
Purpose of Scientific Study: The objectives of this project are1) determine current distribution of leopard frogs in the Glen Canyon area; 2) evaluate relative population sizes in different reaches of the river, and specifically to compare population distribution and numbers between Glen Canyon (impounded) and Canyonlands area(unimpounded); 3) analyze degree and pattern of geographic separation and genetic divergence among populations; 4) locate isolated, relict populations that may require direct management intervention for their persistence; 5) examine habitats used by leopard frogs in the region, for use in developing management actions; and 6) develop specific management strategies & conservation priorities for leopard frog populations in the region.
Findings/Accomplishments for 2007: The overall study of which this is a part has been focused on the distribution and population status of northern leopard frogs in Glen Canyon and Grand Canyon. Leopard frogs are much reduced in both of these areas, so we expanded surveys to surrounding areas in an attempt to find viable populations nearby, and to assess the species' status over a larger area. Northern leopard frogs were previously known from Natural Bridges, and we found an evidently healthy, reproducing population in the Kachina Bridge area. Suitable habitat appears to be relatively limited, however; in White Canyon above and below the boundaries of Natural Bridges, the stream course is mostly dry.